

The Internet of Senses: Digital Aroma

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The consumer predictions about the **Internet of Senses** (IoS) are among the highlights in the ninth edition of the **Ericsson ConsumerLab** Hot Consumer Trends report throughout 2030.

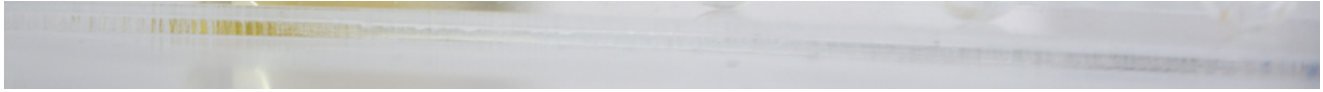
The report is based on data from an online survey of 46 million early technology adopters, and on Ericsson ConsumerLab's global consumer and industry research activities in 15 cities around the world. The research was conducted in collaboration with renowned industry organizations and world-leading universities.

According to Ericsson Research, consumers expect an array of beneficial services from connected technology interacting with their senses of sight, sound, taste, smell, and touch to be reality by 2030. Today, we explore the sense of smell, and what the Internet of Senses will bring: The digital aroma.

See Also

Internet of Senses: The future of smell is digital





The chemical language of scent is a physical sensation that affects us directly and deeply. Source: [chriss ns/iStock](#)

Smell is important. The chemical language of scent is a physical sensation that affects us directly and deeply. This is why, for example, car manufacturers make sure that their cars smell new, or why coffee shops are so much more alluring than vacuum-packed coffee from the supermarket.

Typical online experiences do not involve scent today. However, consumers are estimating our sense of smell to be a key part of the Internet by 2030. More than half of the world's population already lives away from nature, and continued urbanization drives have increased our need for natural experiences.

According to the survey conducted by Ericsson ConsumerLab, around 6 in 10 consumers expect to be able to **digitally visit** forests or the countryside, including experiencing all the natural smells of those places. This is the most highly held expectation among the **smell-related concepts** respondents were asked to rate, and it indicates a strong need for deeper immersion than videos can offer.

The survey found that according to consumers, the experience of watching any type of video would feel more immersive if you could **smell the action**. By 2030, 56 percent expect to be able to digitally savor all the **smells in films** they watch. Although there have been attempts to **incorporate scents during films** as far back as the early 1960s, their failure to gain popularity was most likely due to a lack of effective technology rather than of popular interest.

Internet of Senses: Smelling the movie

Back in the late 1950s, Hans Laube invented the **Smell-O-Vision**, a system which released odor during the **projection of a film** so that the viewer could effectively smell what was happening in the movie. The Smell-O-Vision faced competition with **AromaRama**, a similar system invented by Charles Weiss which emitted scents through the air-conditioning system of a theater.

Most Popular

During the only use of Smell-O-Vision in a movie theater, the aromas were released with a distracting hissing noise and audience members in the balcony complained that the scents reached them several seconds after the action was shown on the screen.

In other parts of the theater, the odors were too faint, causing audience members to sniff loudly in an attempt to catch the scent. These first technical problems were mostly corrected after the first few showings. However, the poor word of mouth, in conjunction with generally negative reviews of the film itself, led to the decline of Smell-O-Vision.

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In July 2013, Spanish engineer and inventor Raul Porcar developed and patented Olorama Technology, a wireless system with the aim to incorporate scents into movies, **Virtual Reality**, and all kinds of **audiovisual experiences**.

In the 2020s and toward 2030, the **digital aroma** will be further developed. By 2030, the Internet of Senses will make it possible to digitally transmit scents in the way many others before this time have envisioned and anticipated.

Internet of Senses and digital scent technology: Scentography



Using digital scent technology it is possible to sense, transmit, and receive smell through the Internet. Source: [JK1991/iStock](#)

Scentography is a technique that creates and stores odor by artificially recreating a smell using chemical or electronic means.

Digital scent technology, also called olfactory technology, is the engineering discipline that deals with olfactory representation. Digital scent technology is a technology that enables media such as video games, movies, music, and Web pages to sense, transmit, and receive **scent-enabled content**.

In other words, using digital scent technology it is possible to sense, transmit, and receive **smell through the Internet**. The sensing part of this technology works using olfactometers and electronic noses.

Internet of Senses: The smell of data



Consumers are expecting a device that digitally transforms stinky smells into nice fragrances in their noses. Source: [Puhimec/iStock](#)

According to Ericsson Research, given our shallow acquaintance with many of the world's aromas, it also seems that consumers are open for innovation in this field. The survey found that "47 percent of consumers are expecting the smell of data to be available for companies to use commercially." At least for now, many do not see the need to keep their **digital smell** private.

Finally, this technology does not have to cause a stink – we will be able to avoid bad smells whenever we choose. More than half of those surveyed are expecting a device that digitally transforms stinky smells into nice fragrances in their noses. Almost half also expect to be able to control how they smell to others, using **digital perfume** and deodorants.

Next in the series exploring the **Internet of Senses trends**, we will have a closer look at what **total touch** will bring. Here below, you can find previous installments of the Internet of Senses trends series, and other curated stories.